

# NEWS & ALERTS FROM THE SMART GRID INTEROPERABILITY PANEL (SGIP)

Thursday, July 26, 2012

## Update on SGIP 2.0

As reported in the Member News two weeks ago, the Governing Board endorsed a business sustainment plan for the transition to a new organization, which is referred to as "SGIP 2.0," and is described in more detail in a letter from Governing Board Chairman John McDonald (<https://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/July2012McDonaldLetter>). The plan was created by the Business Sustainment Plan Working Group, which is now seeking active participation from the membership to help with the transition and beyond.

Since the approval of the SGIP Governing Board on July 10, a new legal entity was formed in order to provide the foundation on which to execute the implementation of the approved Business Sustainment Plan. Later this year tailored SGIP 2.0 Charter and Bylaws will be developed as part of the implementation plan project.

The BSPWG holds weekly open meetings on Mondays at 5:30 pm Eastern (<https://www2.gotomeeting.com/register/754223682>).

**LEARN MORE or GET INVOLVED:** <http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/BSPWG>

## Standards Vote Update from the Program Management Office

The following standards will be up for a Governing Board vote beginning next week. The PMO has been awaiting a final review on the NISTIR 7628, Guidelines for Smart Grid Cyber Security from the SGAC. That is expected to be approved tomorrow, and the Governing Board ballot can be created.

1. [IEC 60870-6-503](#) - The IEC 60870-6-503 (Telecontrol protocols compatible with ISO standards and ITU-T recommendations - TASE.2 Services and protocol) defines the protocol services provided by the protocol in order to carry the object models. These services include associations, data sets, transfer sets, device objects, program objects, and event reporting among others. This standard describes how these services are implemented using the Manufacturing Message Specification (MMS), ISO 9506.
2. [IEC 60870-6-702](#) - IEC 60870-6-702 defines a standard profile, or set of options for implementing the application, presentation, and session layers. This is known as an A-profile. For a complete protocol implementation of TASE.2, this A-profile must interface to a connection-oriented transport profile, or T-profile that specifies the transport, network and possibly data link layers. A T-profile that is commonly used with this standard includes RFC1006, TCP, IP, and Ethernet.
3. [IEC 60870-6-802](#) - IEC 60870-6-802 defines the object models for Telecontrol Application Service Element 2, also known as Inter-Control Center Protocol (TASE.2/ICCP) data. This standard is used by almost every Energy Management System in the world to communicate between control centers.
4. [NISTIR 7628](#) - NISTIR 7628, Guidelines for Smart Grid Cyber Security is a three-volume report, NISTIR 7628, Guidelines for Smart Grid CyberSecurity, presents an analytical framework that organizations can use to develop effective cyber security strategies tailored to their particular combinations of Smart Grid-related characteristics, risks, and vulnerabilities.
5. [ANSI C12.1-2008](#) - ANSI C12.1-2008 - Electric Meters Code for Electricity Metering establishes acceptable performance criteria for new types of ac watt-hour meters, demand meters, demand registers, pulse devices and auxiliary devices. It also describes acceptable in-service performance levels for meters and devices used in revenue metering.
6. [ANSI C12.18-2006/IEEE 1701-2011](#) - Protocol Specification for ANSI Type 2 Optical Port details the criteria required for communications between a C12.18 device and a C12.18 client via an optical port. The C12.18 client may be any electronic communications device. This standard establishes protocol specifications and provides an open-platform communications protocol for two-way communication with a metering device through an ANSI Type 2 optical port. It also covers compliance, backward and forward compatibility, the use of reserved fields, the identification service, packet size, and the toggle bit.

7. [ANSI C12.19-2008](#) - American National Standard For Utility Industry End Device Data Tables presents common structures for encoding data in communication between end devices (meters, home appliances, ANSI C12.22 nodes) and utility enterprise collection and control systems using binary codes and XML content. The tables support gas, water, and electric sensors and related appliances.
8. [ANSI C12.20-2010](#) - American National Standard for Electricity Meters—0.2 and 0.5 Accuracy Classes establishes acceptable performance criteria for electricity meters, and covers accuracy class designations, current class designations, voltage and frequency ratings, test current values, service connection arrangements, pertinent dimensions, form designations, and environmental tests. In this revision, the standard was broadened to allow three phase current and voltage sources as an optional test method to the existing single phase, series, parallel method.
9. [ANSI C12.21-2006/IEEE 1702-2011](#) - Protocol Specification For Telephone Modem Communication details the criteria required for communications between a C12.21 Device and a C12.21 Client via a modem connected to the switched telephone network. The C12.21 Client could be a laptop or portable computer, a master station system or some other electronic communications device. This Standard specifies the differences between ANSI C12.18-2005, Protocol Specification for ANSI Type 2 Optical Port and ANSI C12.19-1997, Utility Industry End Device Data Tables, and those features and services required to describe a protocol specification for Telephone Modem Communications.
10. [ANSI C12.22-2008](#) - American National Standard for Protocol Specification for Interfacing to Data Communication Networks is an application-level Standard that describes the process of transporting C12.19 table data over a variety of networks. The wide variety of information that it covers will be necessary in the implementation of the Smart Grid. This new standard will advance interoperability among communications modules and meters. C12.22 uses AES encryption to enable strong, secure Smart Grid communications, including confidentiality and data integrity, and it is also fully extensible to support additional security mechanisms the industry may require in the future.
11. [IEC 61850-90-5](#) Edition 1.0 (2012-05) – Technical Report: Communication Networks and Systems for Power Utility Automation - Part 90-5: Use of IEC 61850 to transmit synchrophasor information according to IEEE C37.118. This document is a Technical Report that is part of the IEC 61850 suite of standards. The primary standard for the communications of phasor measurement unit (PMU) and phasor data concentrator (PDC) data and information is the IEEE Standard C37.118 which was published in 2005 and updated in 2011 as C37.118.1 (measurement) and C37.118.2 (communications). The C37.118.1 standard includes requirements for the measurement and determination of phasor values. This part of IEC 61850 provides a way of exchanging synchrophasor data between PMUs, PDCs, and WAMPAC (Wide Area Monitoring, Protection, and Control) and control center applications.

The Governing Board vote closes on August 13. The plenary vote will be conducted shortly afterwards with a final date TBD. Stay tuned for important announcements as these standards make their way to a plenary vote. All CoS materials are posted on the SGIP TWiki site and reviews of these materials may begin immediately.

## ***Natural Gas Working Group Holds Virtual Meeting Next Wednesday***

The newly formed Natural Gas Working Group will hold its virtual kickoff meeting on Wednesday, August 1st from 1-2 pm Eastern Daylight Time. Attendance is open to all; register at <https://www2.gotomeeting.com/register/863979298>.

The SGIP has focused largely on the electric-centric Smart Grid. However, as FERC, NERC, NARUC, and others have noted, gas-fired electric generation has become increasingly prevalent due to simple economics, yet topics like interdependency and inter-grid communications capabilities require considerable further study. Based on the success to date of the SGIP's efforts addressing Smart Grid standards and remedying policy gaps, the SGIP is the ideal forum for collaboration between the broad ecosystem of electric and gas stakeholders on these vital critical infrastructure topics.

In the Governing Board Face-to-Face meeting held on 9 July in Portland, discussions continued and support for coordinating a working group were encouraged. Led by Mike Coop, Governing Board representative for Stakeholder Category 3, Consumers – Residential, Commercial, and Industrial, and Chris Ziolkowski from the Gas Technology Institute, the Governing Board discussed some of the common infrastructure and problems experienced by gas generators and distributors. These common elements suggest there are possible synergies and common/similar standards that can be

utilized by the gas industry to mitigate potential communication conflicts and build efficiencies for utilities and organizations supporting the different industries.

The group will work to address the intersection of electric and gas grid interoperability standards, and is soliciting participants interested in contributing. Topics include, but are not limited to, the identification of applicable interoperability standards (e.g., ANSI's C.12 series, MultiSpeak, the CIM) for inclusion in the SGIP's Catalog of Standards; potential gaps between standards and policy; interdependency between gas and other infrastructures, particularly electric and water; communications technologies (e.g., automated metering infrastructure, distribution automation); reliability, safety, and cybersecurity; and others to be identified by the workgroup.

**LEARN MORE or GET INVOLVED:** <http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/NaturalGasWG>

### ***Business & Policy Group Focus on Opt Out***

During their session at the Summer Face-to-Face, the Business & Policy Domain Expert Working Group (BnP DEWG) attendees gave strong attention to smart metering and consumer requests to “Opt Out” of their installation. Updates on current Opt Out proceedings for Michigan (Cloutier), California (Villareal) and Texas (Wright) were presented during the well-attended discussion on Smart Meter Opt Out across the U.S. Ward Camp presented preliminary percentages of opt out across the U.S. and special guest, Judith Schwartz presented strategies for dealing with Opt Out for customers. You may find all the presentations here on the TWiki: <https://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/Summer2012Access>.

Additionally, Dave Wollman gave a status of the Green Button Initiative as it moves to Phase 2 and the leaders of the BnP DEWG Device Integration Subcommittee provided an update on their progress.

**LEARN MORE or GET INVOLVED:** <http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/BnP>

### **SAVE THE DATES: UPCOMING MEETINGS**

**Sept. 6:** SGIP Governing Board Meeting, 1pm Eastern (<https://www2.gotomeeting.com/register/719926258>)

**Sept. 14:** SGIP Plenary Meeting, 1pm Eastern (<https://www2.gotomeeting.com/register/444978162>).

Mandatory attendance for Participating Member organizations.

**Oct. 2-4:** GridWeek, Washington DC (<http://www.gridweek.com>)

**Dec. 3-6:** SGIP Winter 2012 Face-to-Face Conference co-located at Grid-Interop, Irving TX (<http://www.grid-interop.com/2012/>)

### ***NIST Expands Smart Grid Website***

The NIST Smart Grid website (<http://www.nist.gov/smartgrid>) now includes a number of new webpages highlighting the work of NIST and the SGIP in advancing Smart Grid interoperability through standards coordination. Several of the pages are written for a non-technical audience, while others will be of special interest to those more directly involved in developing and implementing Smart Grid standards. Here's a quick overview of the new pages:

**Smart Grid: A Beginner's Guide** [<http://www.nist.gov/smartgrid/beginnersguide.cfm>]

This page provides a quick overview for the general reader. *SmartGridNews.com* described this guide as “a readable and jargon-free rundown on the basics of Smart Grid and standards. No lengthy descriptions of synchrophasor technology or meter data management, just the nuts and bolts of what Smart Grid is and why standards are such a key part of it.”

**Smart Grid Interoperability Panel (SGIP)** [<http://www.nist.gov/smartgrid/sgipbuffer.cfm>]

This page provides a quick introduction to the SGIP and the [Catalog of Standards](#).

**Examples of Smart Grid Standards** [<http://www.nist.gov/smartgrid/examples-of-smart-grid-standards.cfm>]

This page and its subpages provide a non-technical overview of the SGIP's PAP process (see [How SGIP Develops and Coordinates Standards for the Smart Grid](#)). Also included are non-technical explanations of some of the initial standards added to the Catalog of Standards (see [PAP 1: Building an "Energy Internet": Internet Protocols for the Smart Grid](#) and [PAP 11: Charging Your Electric Car on the Smart Grid : Three Key Standards.](#)).

**Green Button Initiative** [<http://www.nist.gov/smartgrid/greenbutton.cfm>]

This page highlights the ways in which NIST and the SGIP (with PAP 10 and PAP 20) are playing key roles in this effort to provide electricity customers with easy access to their energy usage data in a consumer-friendly and computer-friendly format.

**Standards Information Resources from NIST and SGIP** [[http://www.nist.gov/smartgrid/standards\\_info\\_resources.cfm](http://www.nist.gov/smartgrid/standards_info_resources.cfm)]

This page, which is written for those technical experts more directly involved with Smart Grid standards, outlines the differences between NIST's "Identified Standards" list and the [SGIP's Catalog of Standards](#). The page describes these two resources, including their purposes, relationship, and usefulness to the Smart Grid community.

Throughout the NIST Smart Grid website, readers who would like additional information are provided links to relevant portions of the [NIST Smart Grid Wiki Collaboration Site](#) (also known as "the Twiki"). As SGIP continues to expand its wealth of information resources, the NIST website will be updated to reflect and complement SGIP's contributions to Smart Grid interoperability.

*Contact SGIP Leadership and Administrator at [sgipgb.administrator@enernex.com](mailto:sgipgb.administrator@enernex.com)*

*EnerNex serves as the SGIP Administrator under a NIST-awarded contract. For more information, [click here](#).*

**To manage your email subscriptions to any of the SGIP listservs including this one, please visit [smartgridlistserv.org](http://smartgridlistserv.org).**